

REMARKS

Reconsideration of the present application in view of the present Amendments and the following remarks is respectfully requested. The specification has been amended solely to correct an inadvertent typographical error. Without acquiescence in any rejection and without prejudice to the prosecution of encompassed subject matter in any related continuation, continuation-in-part, or divisional application, Applicants have amended claims 45, 50, 52, and 54 and canceled claim 46. Accordingly, claims 45 and 50-55 are currently under examination in the Application. No new subject matter has been added. Support for the amendments may be found throughout the specification, for example, at page 10, line 27 through page 11, line 12.

REJECTION UNDER 35 U.S.C § 112, SECOND PARAGRAPH

The PTO rejects claims 45, 46, and 50-55 under 35 U.S.C. § 112, second paragraph, for allegedly failing to particularly point and distinctly claim the subject matter which applicants regard as their invention. The PTO asserts that in claim 45 the phrase “relative to DSP-3” is unclear regarding whether DSP-3 refers to the sequence set forth in SEQ ID NO:2 or to additional sequences.

Applicants respectfully traverse this rejection and submit that independent claim 45, and dependent claims thereon, particularly point out and distinctly claim the subject matter Applicants regard as their invention when read in light of the specification (*see, e.g.*, page 10, lines 6-8). Nevertheless, to expedite prosecution and to increase further the clarity of the claims, Applicants have amended claim 45 to recite that a DSP-3 substrate trapping mutant, as clearly described by the claim, binds to a substrate with an affinity that is not substantially diminished relative to that of a DSP-3 polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2, and that the ability of the polypeptide to dephosphorylate a substrate is reduced relative to that of the DSP-3 polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2.

Applicants therefore respectfully submit that all claims meet the requirements for definiteness under 35 U.S.C. § 112, second paragraph, and respectfully request that this rejection be withdrawn.

REJECTION UNDER 35 U.S.C § 112, FIRST PARAGRAPH (ENABLEMENT)

The PTO rejects claims 45, 46, and 50-55 under 35 U.S.C. § 112, first paragraph, for alleged lack of enablement. The PTO concedes that the specification enables a DSP-3 substrate trapping mutant polypeptide that comprises an amino acid substitution at position 57 and/or position 88 of SEQ ID NO:2; however, the PTO alleges that the specification does not reasonably provide enablement for any substrate trapping mutant of any dual specificity phosphatase that has 75% identity to SEQ ID NO:2.

Applicants respectfully traverse this rejection and submit that as disclosed in the present specification and recited in the instant claims, Applicants fully enabled the claimed invention at the time the Application was filed. Applicants submit that in view of the amendments submitted herewith, which include amendments to claim 45 and cancellation of claim 46 without acquiescence or prejudice, the basis for this rejection is obviated.

Applicants submit that the disclosure provides enabling guidance for a person skilled in the art to make and use, readily and without undue experimentation, the claimed DSP-3 substrate trapping mutant polypeptides that differ from the amino acid sequence set forth in SEQ ID NO:2 by a substitution at position 57 or position 88 of SEQ ID NO:2, such that the DSP-3 substrate trapping mutant polypeptide binds to a substrate with an affinity that is not substantially diminished relative to a DSP-3 polypeptide comprising the amino acid sequence set forth in SEQ ID NO:2, and such that the ability of the DSP-3 substrate trapping mutant polypeptide to dephosphorylate a substrate is reduced relative to the DSP-3 polypeptide of SEQ ID NO:2, and related compositions (*see, e.g.*, specification at page 10, line 23 through page 11, line 18). Accordingly, Applications respectfully submit that the present claims meet the requirements for enablement under 35 U.S.C. § 112, first paragraph, and request that the rejection of the claims be withdrawn.

Applicants respectfully submit that all claims in the Application are allowable.  
Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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